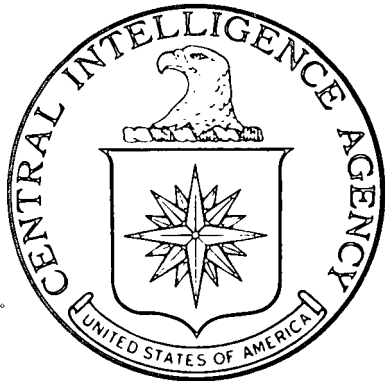


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PIR

PHOTOGRAPHIC INTELLIGENCE REPORT

LIQUID ROCKET ENGINE TEST FACILITY

OMSK, USSR

Declass Review by NIMA/DOD



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CIA/PIR 71007

DATE Sep 1966

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LIQUID ROCKET ENGINE TEST FACILITY

OMSK, USSR

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FIGURE 1. LIQUID ROCKET ENGINE STATIC TEST FACILITIES, USSR.



FIGURE 2. OMSK STATIC TEST FACILITY.

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PREFACE

[ ] coverages of the Omsk Liquid Rocket Engine Static Test Facility [ ] have made possible a more detailed analysis and more accurate mensuration of the facility. This report is intended as an update of CIA/PIR-61115 of May 1966.

SUMMARY

The Omsk Liquid Rocket Engine Static Test Facility [ ] is located at 55-25N 73-17E, 29 nautical miles (nm) north of Omsk and 2 nm south of the village of Gornaya Bitiya (Figures 1 and 2). It is positioned on the southeast side of the Irtysh River, a major tributary of the OB. The facility was first observed on [ ] at which time it was under construction. Numerous subsequent coverages permit the establishment of accurate construction chronologies for major portions of the installation.

The facility, served by a rail line which extends north from Omsk, consists of three functional areas designated as follows: the operations area, the housing area, and the construction support area (Figure 2). The rail line serving the facility divides into two branches just south of the construction support area, with one branch serving the support area and the other continuing into the operations area. An all-weather road also interconnects all three areas of the facility. Two vertical test stands in the operations area are the primary features at this installation. Vertical Test Stand No. 1 encloses a single test position which is believed to have been operational since the fall [ ]. Vertical Test Stand No. 2, still under construction, appears to be a two position structure.

Since the fall [ ] construction in the housing area has consisted mostly of two and three story apartment buildings.

At the construction support area, activity in support of construction at the operations area and housing area has been evident, but no expansion has taken place [ ].

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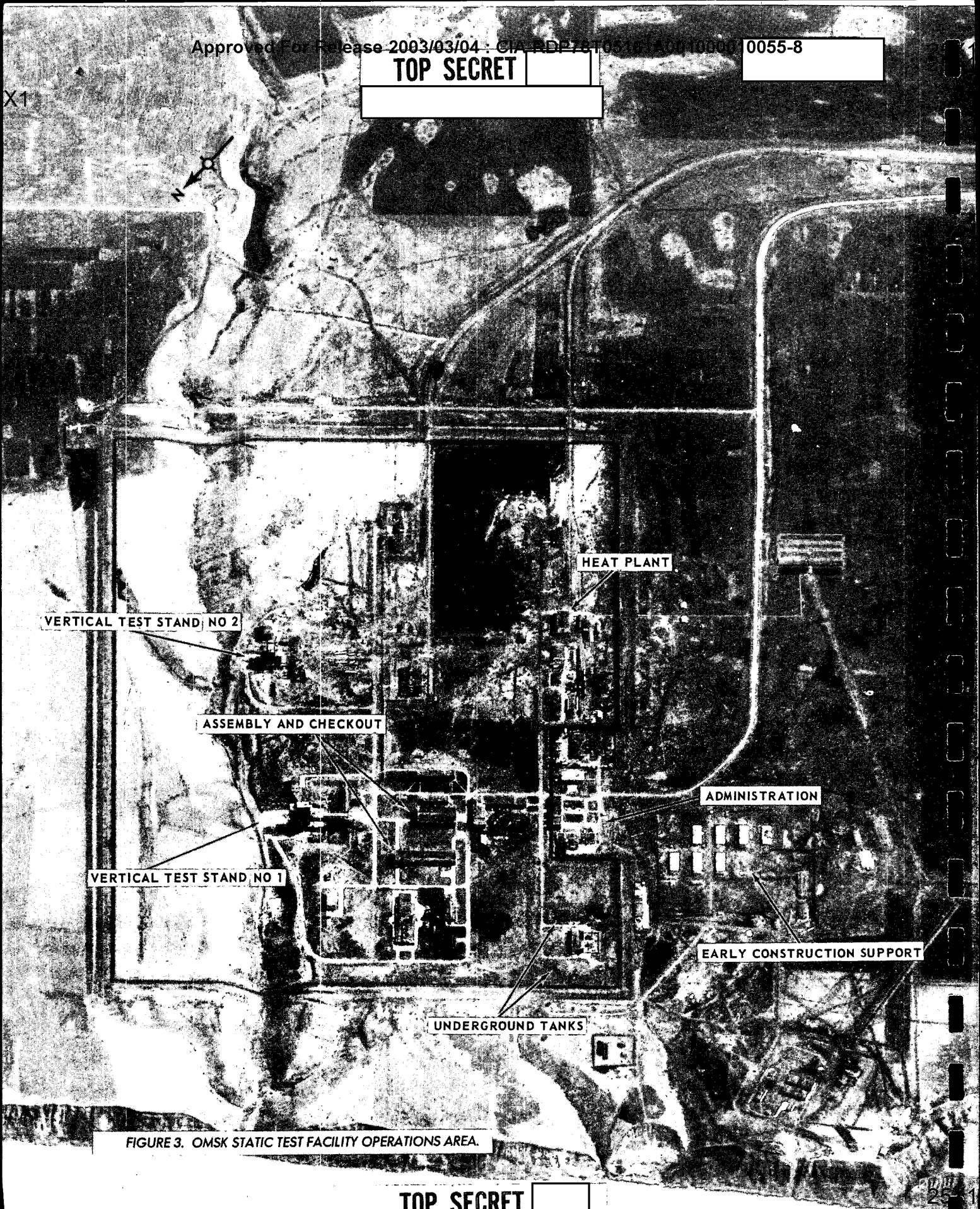


FIGURE 3. OMSK STATIC TEST FACILITY OPERATIONS AREA.

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OPERATIONS AREA (Figures 3 and 4)

The operations area is served by four spurs from the branch rail line and also by the main access road from the housing and support areas. Most of the buildings are located within a single security fence; however, administration, construction, support, and certain miscellaneous buildings are outside of the secured area. Within the fenced area are 33 buildings with a total floor space of approximately 254,000 square feet. Including those buildings outside the fence line, the entire area contains 45 buildings with a total floor space of approximately 363,000 square feet. Eight buildings were completed on or before [redacted] The rest were completed by [redacted] with the exception of Vertical Test Stand No. 2 and its associated control buildings. The operations support buildings and structures are listed in detail on Table 1 and keyed to Figure 4.

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Certain observations are of interest in discussing the operations area.

1. Building No. 5 has an extremely large amount of available floor space [redacted] with no less than eight large stacks protruding from its multi-leveled roof. This suggests a heat treatment plant with the possibility existing of a small foundry being at one end. There is a similar building in the operations area at Krasnoyarsk Static Test Facility.

2. Building No. 8, which is immediately adjacent to Building No. 5 is a large drive-through building, which measures [redacted] is probably used for the assembly of components.

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3. Building No. 3 has a possible connection with four large underground tanks of undetermined usage, located nearby.

4. [redacted] there was a large secured area near the southwest edge of the operations area containing ten identical buildings measuring [redacted] only one of these buildings remained (Figure 4, Annotation 1) and the security fence had been partially removed. These buildings were probably used to house construction personnel while the area was in an early stage of development.

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Vertical Test Stand No. 1 (Figures 5, 6, and 7)

X1 This single position test stand is located on the south side of a deep ravine in the northeast section of the operations area. The super structure of Vertical Test Stand No. 1 measures [ ] and is approximately [ ] Access to the stand is via a 30-foot wide approach ramp which approaches from the south and enters the northwest side of the stand approximately [ ] above the base; access to the base of the stand is served by the original construction road. Two large pipes approximately [ ] and positioned above the access ramp are connected to the side and back of the stand. These pipes angle away from the access ramp at a 30 degree angle. This particular pipe configuration is the only one of its kind at the known Soviet Liquid Static Test Facilities. The precise use of these pipes is not discernible at this time, although they appear to be used for exhausting of some type.

X1 An observation/control building, measuring [ ] and situated 115 feet east of the stand, has six windows on the westerly side apparently for test observation purposes. A large probable control cable trough topped by a small tubular pipe extends from the base of the observation building to a point midway up the east side of the stand. In close proximity to the stand are various assembly, checkout, and support buildings.

X1 Construction roads to the test stand site were evident [ ] However, the first indication of the stand superstructure appeared on [ ] The stand appeared to be complete on [ ]

Vertical Test Stand No. 2 (Figures 8, 9, and 10)

X1 Vertical Test Stand No. 2, which is still under construction, is located approximately 1,000 feet east of Vertical Test Stand No. 1. This second stand measures [ ] and is approximately [ ] Two access ramps approach the stand from the rear and run along the east and west sides. These ramps join the stand approximately 50 feet above the base of the structure and their presence indicates the existence of two positions. A large pipeline enters the rear of the stand west of the right access ramp. It appears to originate at a possible pump house approximately 1,400 feet south of the stand and may be a water line to cool the blast deflectors or a steam line for simulated altitude testing. The latter is taken into consideration due to the proximity of the heat plant to the possible pump house (Figure 4, Buildings 21 and 22). There

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is also the possibility that this line is merely a pipe gallery enclosing several pipes with varying uses.

In close proximity to Vertical Test Stand No. 2 is an observation/control building measuring [REDACTED]. It is situated [REDACTED] east of the test stand on the side of the excavation and appears to be connected to the stand by cable trough similar to those observed at stand No. 1.

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Excavation for stand No. 2 was begun between [REDACTED]

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[REDACTED] the superstructure was readily discernible. The following observations on construction status were noted on [REDACTED] when the stand appeared to be approaching completion.

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1. The blast deflector closest to Vertical Test Stand No. 1 appeared to still be under construction.
2. Access roads to the stand appeared to be unimproved.
3. Construction support buildings and materials remain evident throughout the area.
4. No sign of a blast mark at the completed deflector has been observed.

If the existing support buildings for stand No. 1 are utilized, the stand could be used by late [REDACTED]

#### HOUSING AREA (Figures 11 and 12)

The housing area is located approximately three miles due south of the test facility. Within the area are 102 buildings with a total floor space for living quarters of [REDACTED] (Table 2 keyed to Figure 12). An additional [REDACTED] of floor space is used for administration, storage, support, school, and a heat plant.

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This area is not rail served, but utilizes the main road net for access. Vehicles of approximately 30 feet in length, probably buses, have been observed enroute between the motor pool at the operations area and the housing area.

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Seven different types of housing are in evidence at the Omsk Facility.

1. Fifty-five duplex and four single units account for [redacted] square feet of living space. Twelve of the duplex were present on [redacted] [redacted] 42 more were constructed by [redacted] [redacted], and the remaining one was complete on [redacted]. The four single units were complete before [redacted]. No additional duplex or single units have been erected since that time.

2. Twelve single story apartment units account for [redacted] feet of living area. These units were completed between [redacted] [redacted]

3. Six two-story apartment account for [redacted] of living space. Five of these units were complete by [redacted] [redacted] with the final one being completed by [redacted].

4. Twelve three-story apartment houses account for [redacted] square feet of living area. Ten of the units were complete by [redacted] [redacted] with the final two units being complete by [redacted].

5. Ten four-story apartment houses account for 464,640 square feet of living area. The first two units were completed by [redacted] [redacted] and the additional units have been added since that time.

The last unit was complete by [redacted]. There is additional construction activity to the north of the housing area.

6. Three barracks-type structures within a security fence account for the final [redacted] of living area. These buildings were complete by [redacted].

The removal of early construction support buildings as mentioned in the operations area has also been observed in the housing area (Figures 11 and 12).

CONSTRUCTION SUPPORT AREA (Figures 13 and 14)

The construction support area lies 3 nm southeast of the operations area via the main access road. No security fencing is visible at the area. The area is served both by the eastern branch of the rail line and by the main access road from the housing and operations area.

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Twenty-five buildings and structures in the area account for [redacted] square feet of floor space (Table 3 keyed to Figure 14). The buildings, most of which appear to be used for storage, are single story structures near the rail spur and main access road. A cement batch plant is also located in the area (Figure 12, Items 12, 13, and 14). Extensive use has been made of open storage areas between the rail spur and the main access road (Figure 11). The major portion of this area was complete by [redacted] with two additional units being completed by [redacted] and one final structure being erected as late as [redacted]

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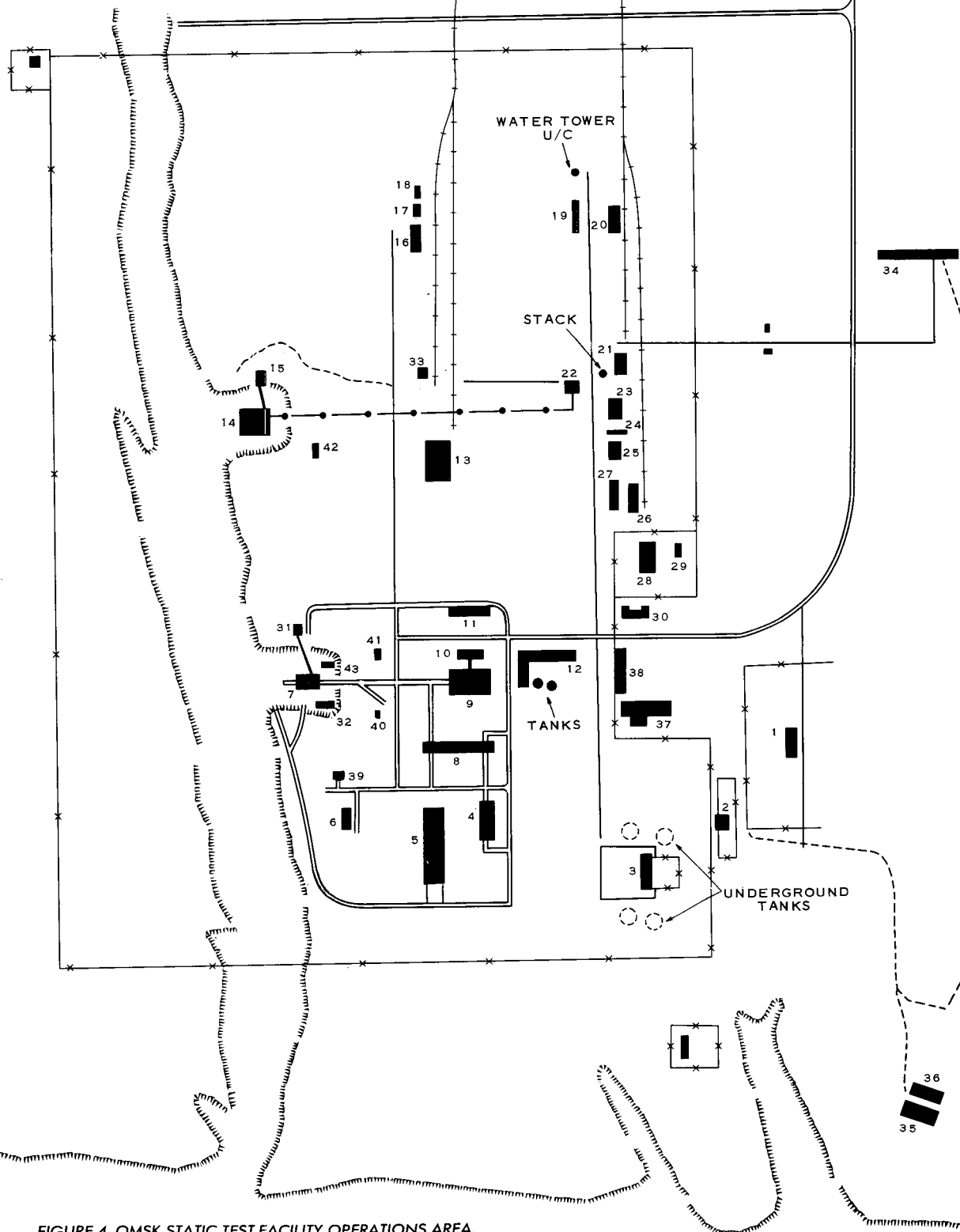
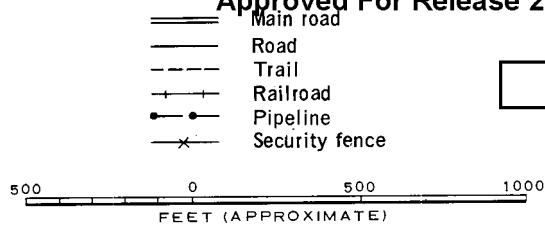


FIGURE 4. OMSK STATIC TEST FACILITY OPERATIONS AREA.

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TABLE 1

## OMSK STATIC TEST FACILITY

Operations Area

<u>Building</u>	<u>Function of Building</u>
1	Construction Support
2	Barracks
3	Undetermined
4	Assembly and Checkout
5	Heat Treatment
6	Undetermined
7	Vertical Test Stand 1
8	Assembly and Checkout
9	Assembly and Checkout
10	Assembly and Checkout
11	Assembly and Checkout
12	Undetermined
13	Support
14	Vertical Test Stand 2 u/c
15	Control Building for Vertical Test Stand 2
16	Receiving and Storage
17	Receiving and Storage
18	Receiving and Storage
19	Receiving and Storage
20	Receiving and Storage
21	Heat Plant
22	Pump House
23	Receiving and Storage
24	Receiving and Storage
25	Receiving and Storage
26	Receiving and Storage
27	Receiving and Storage
28	Motor Pool
29	Motor Pool
30	Administration
31	Control Building for Vertical Test Stand 1
32	Control Associated
33	Support
34 (3)	Support
35	Support
36	Support
37	Administration
38	Administration
39	Undetermined
40	Control Associated
41	Possible Nitrogen Cylinder
42	Control Associated
43	Control Associated
Total	

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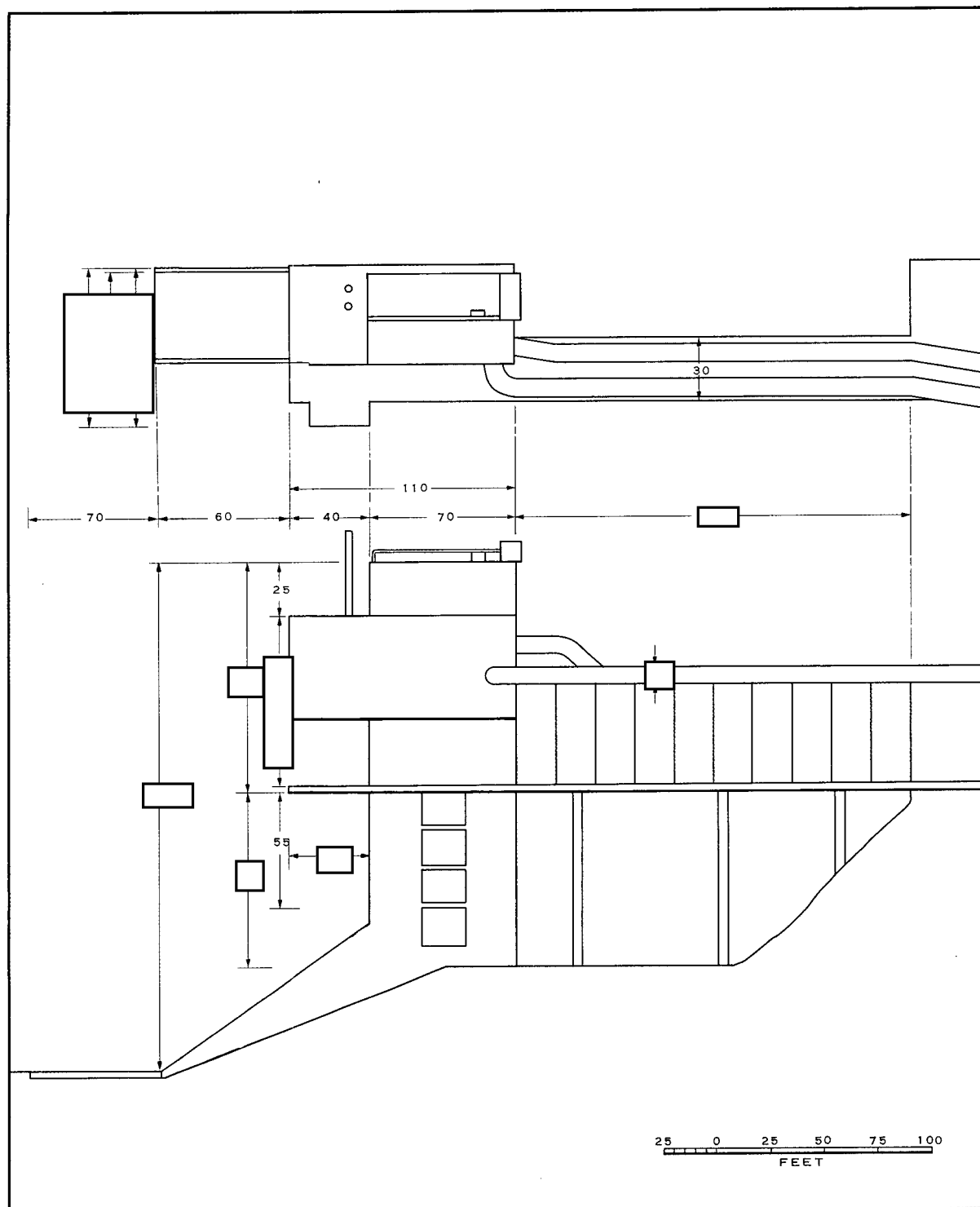


FIGURE 5. VERTICAL TEST STAND 1, OMSK.

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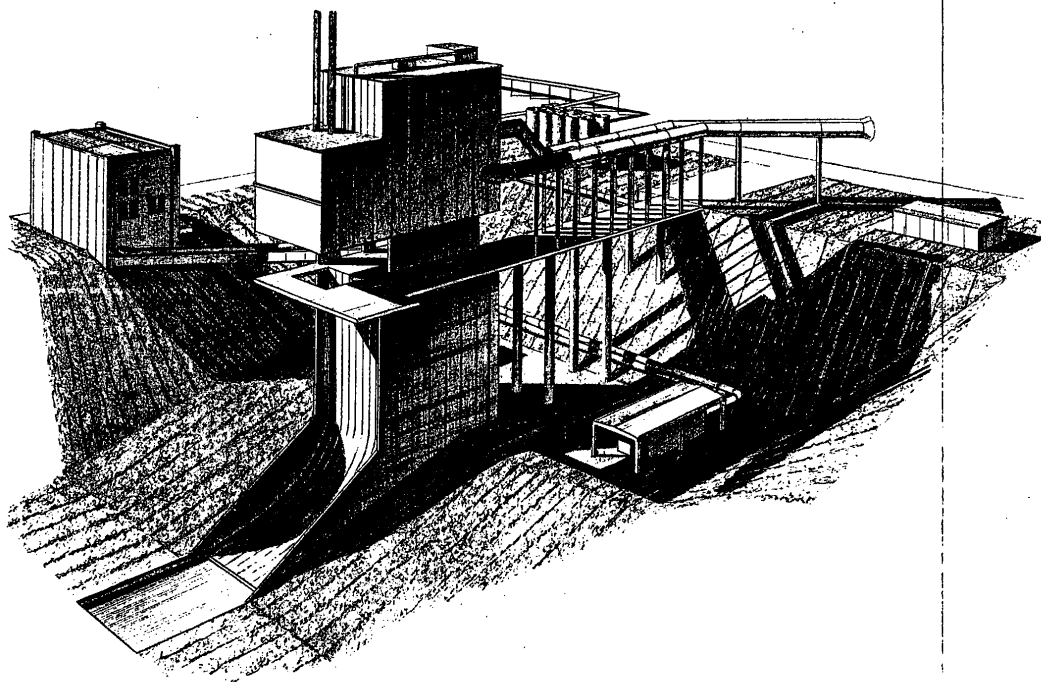


FIGURE 6. TEST STAND I, OWSK.

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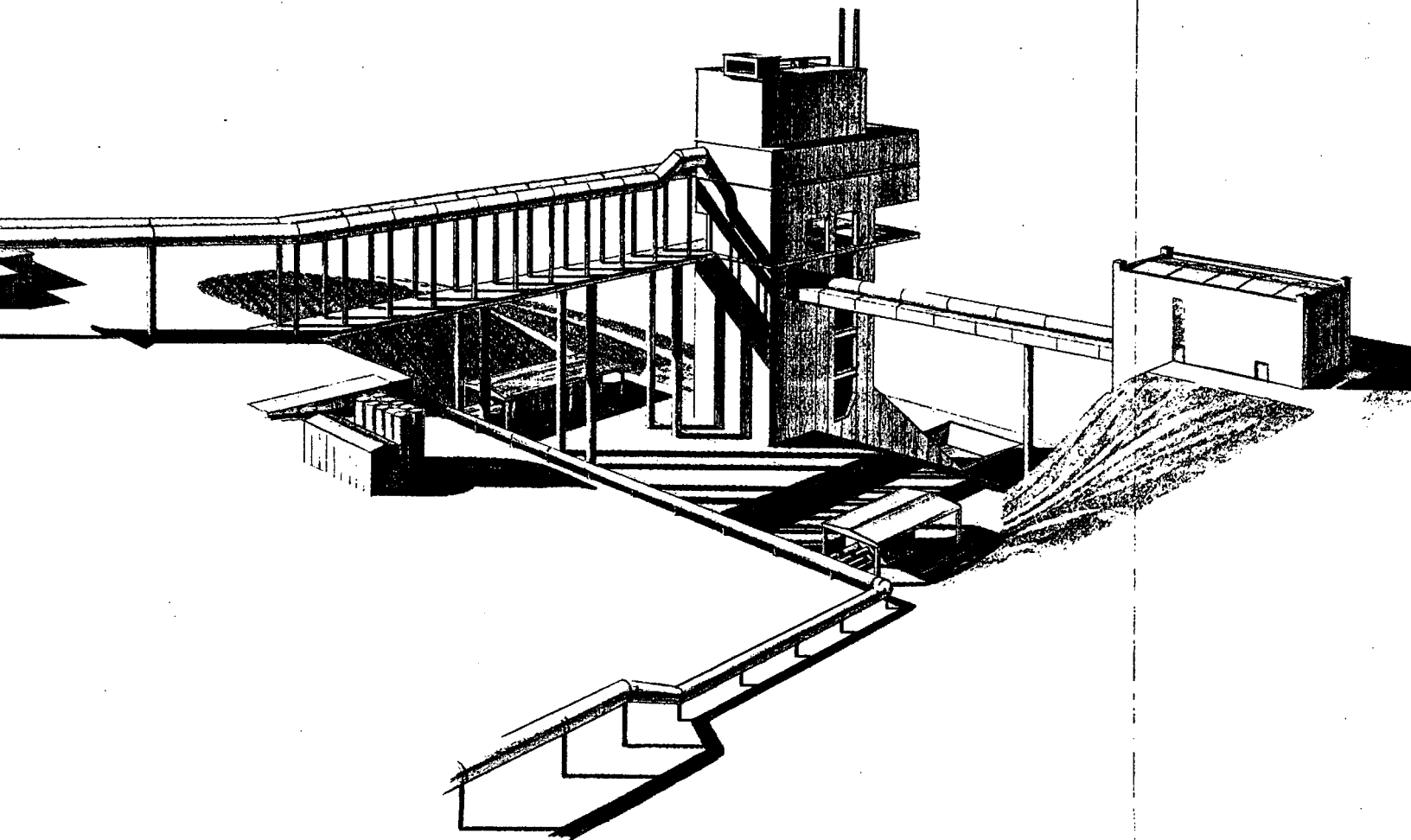


FIGURE 7. TEST STAND 1, OMSK.

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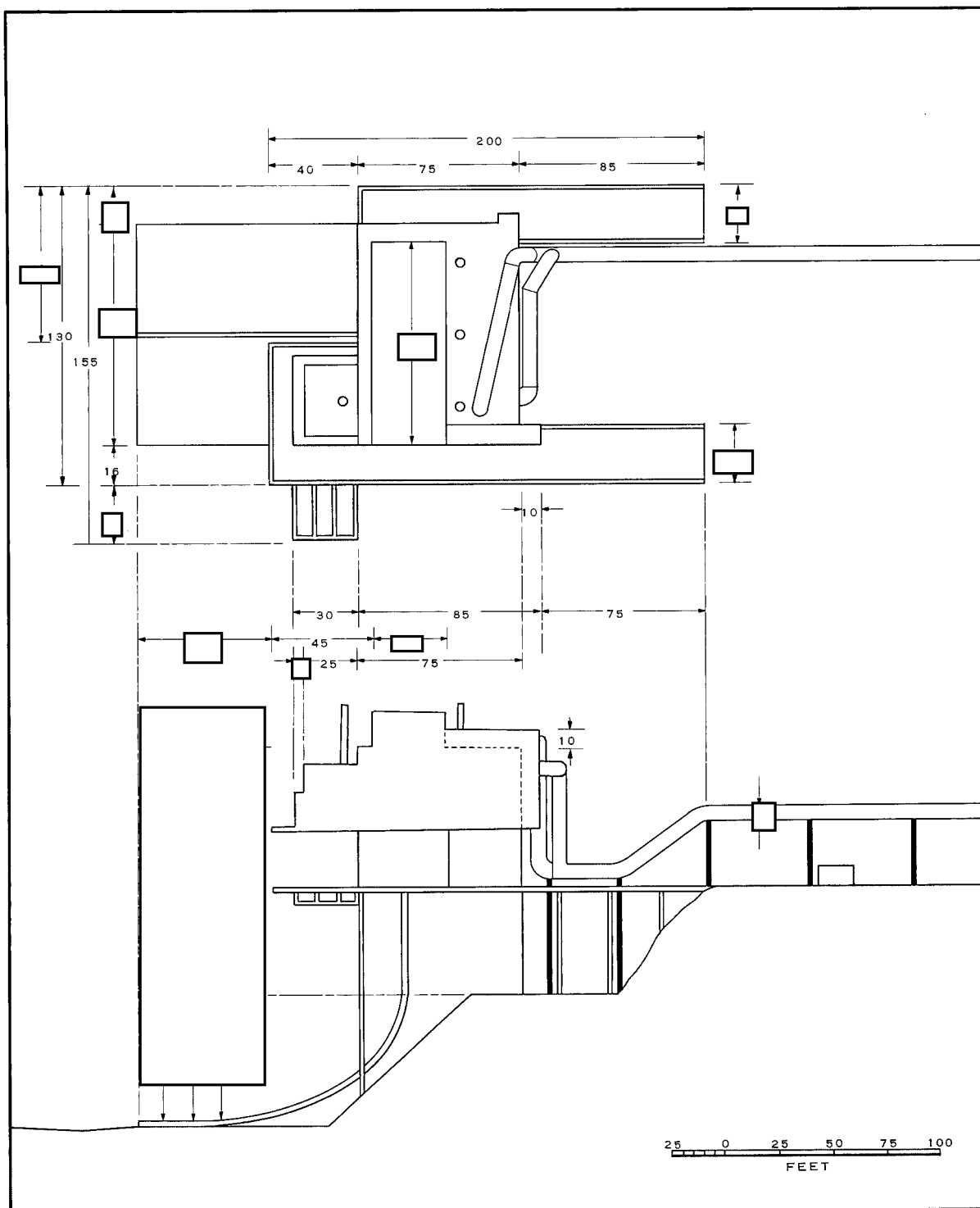


FIGURE 8. VERTICAL TEST STAND 2, OMSK.

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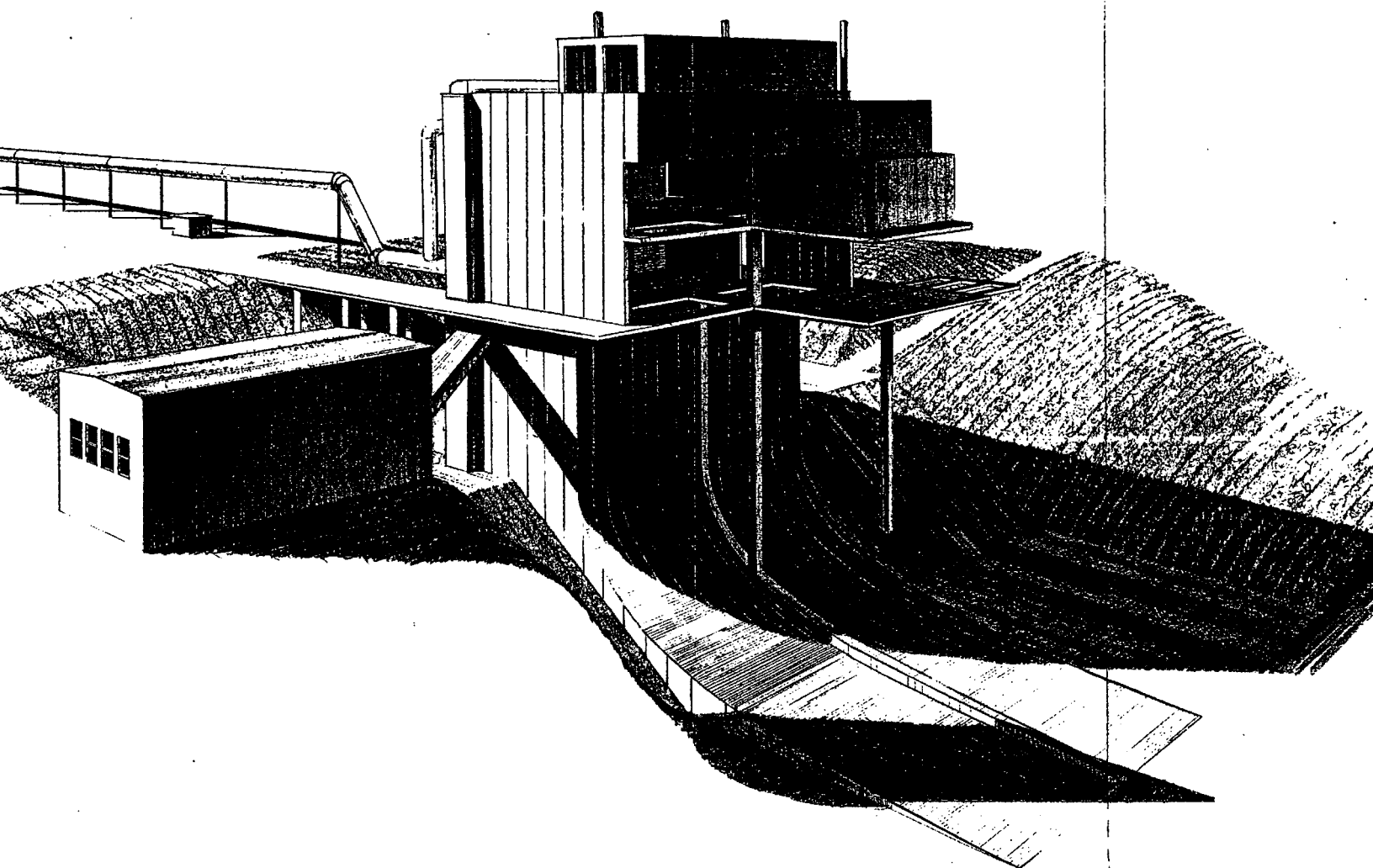


FIGURE 9. TEST STAND 2, OMSK.

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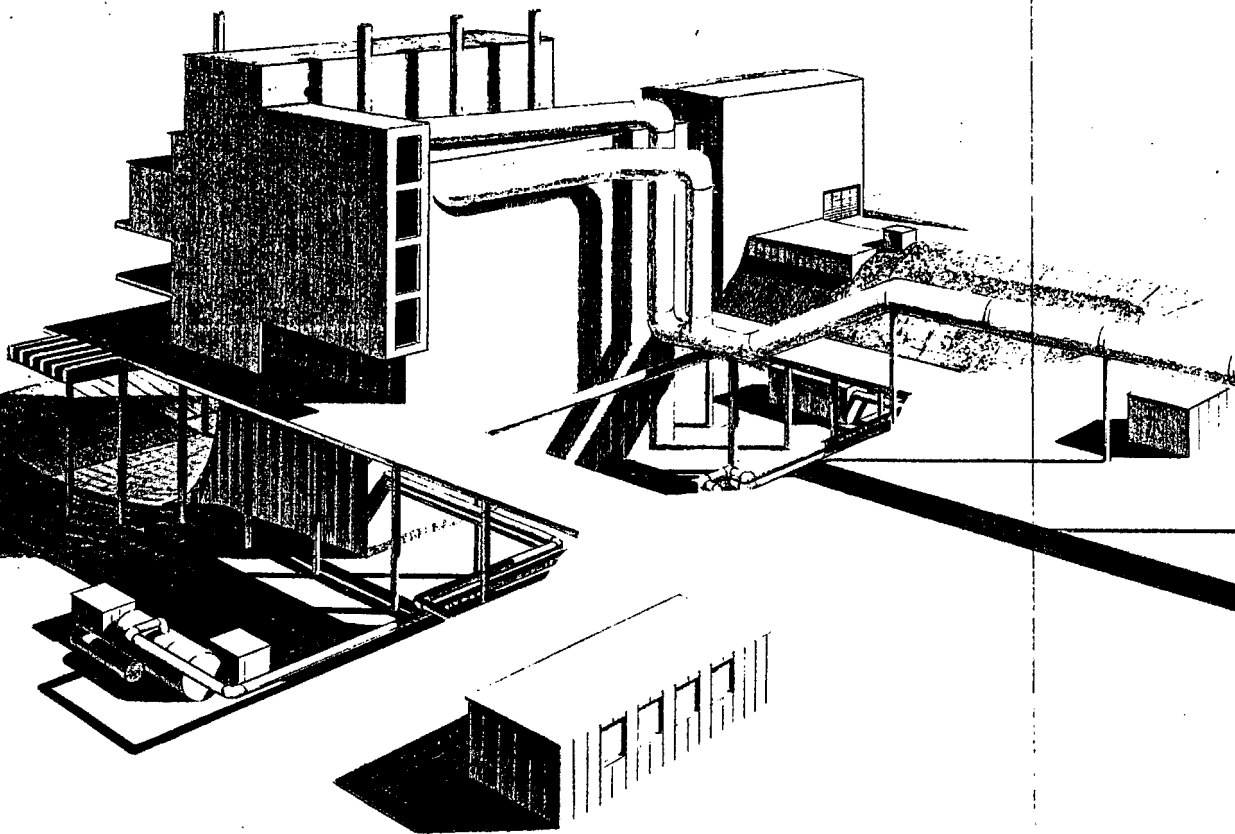


FIGURE 10. TEST STAND 2, OMSK.

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Main road  
Road  
Trail  
Security fence

500 0 500 1000  
FEET (APPROXIMATE)

IRTYSH RIVER

OMSK STATIC TEST FACILITY HOUSING AREA.

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TABLE 2

## OMSK STATIC TEST FACILITY

## Housing Area

Building

1 (24)  
2 (2)  
3  
4  
5  
6  
7  
8  
9 (12)  
10  
11 (5)  
12  
13 (3)  
14  
15 (2)  
16 (4)  
17 (4)  
18 (12)  
19  
20  
21 (9)  
22  
23  
24 (8)  
25 (10)  
  
26 (2)  
27 (2)  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38

Function of Building

Duplex  
Barracks  
Barracks  
Storage  
Storage  
Storage  
Storage  
Storage  
Duplex  
Possible Mess Hall  
Two Story Apartment  
Construction Support  
Construction Support  
Single Story Apartment  
Duplex  
Duplex  
Single Family  
Duplex  
Storage  
Construction Support  
Single Story Apartment  
Single Story Apartment  
Single Story Apartment  
Three Story Apartment  
Four Story Apartment  
  
Three Story Apartment  
Three Story Apartment  
Administration  
Possible School  
Two Story Apartment  
Support  
Support  
Heat Plant  
Support  
Support  
Support  
Support  
Duplex

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STORAGE FACILITIES

CEMENT AND GRAVEL MIXER

OPEN STORAGE

FIGURE 13. OMSK STATIC TEST FACILITY CONSTRUCTION SUPPORT AREA.

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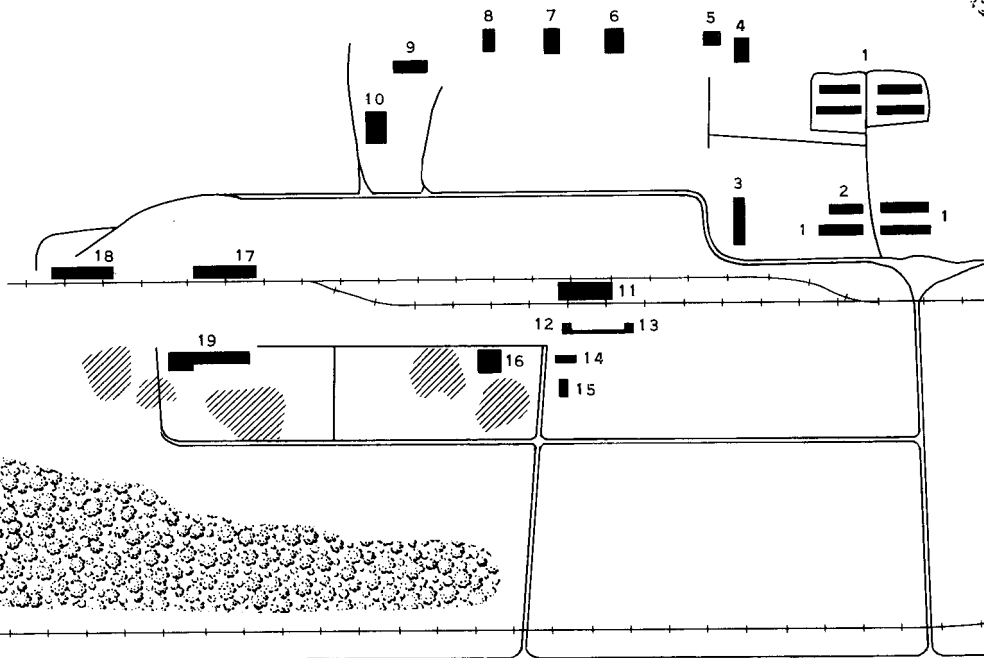


FIGURE 14. OMSK STATIC TEST FACILITY CONSTRUCTION SUPPORT AREA.

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TABLE 3

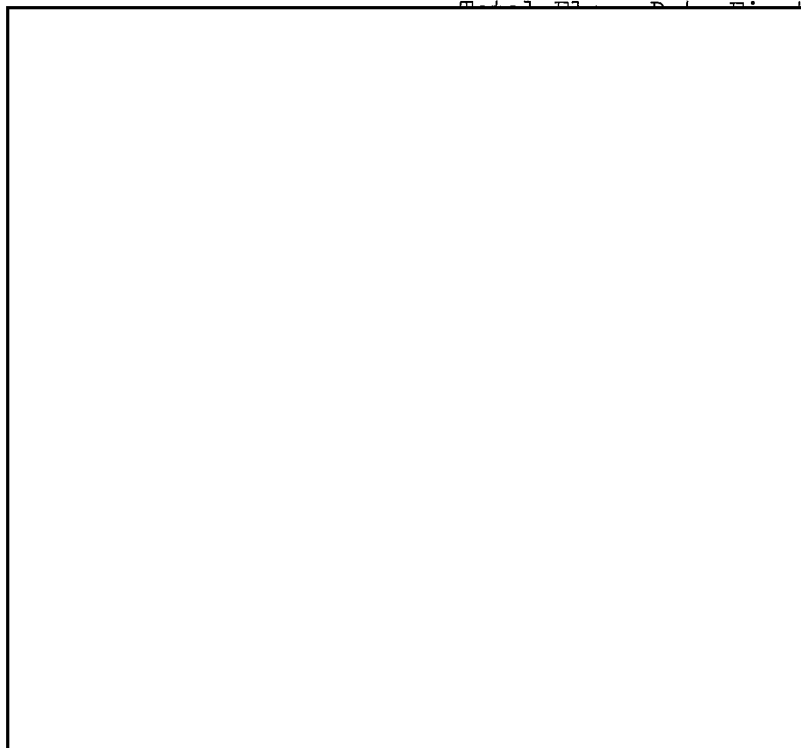
OMSK STATIC TEST FACILITY

Construction Support Area

Building

Function of Building

1 (7)  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19



Storage  
Storage  
Storage  
Storage  
Storage  
Storage  
Storage  
Storage  
Storage  
Storage  
Receiving and Storage  
Cement and Gravel  
Cement and Gravel  
Cement Storage  
Storage  
Receiving and Storage  
Receiving and Storage  
Receiving and Storage  
Receiving and Storage

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